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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,700	01/27/2006	Hirokazu Ooe	2936-0242PUS1	7918
2292 7590 06/16/2010 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER HECKERT, JASON MARK				
ART UNIT		PAPER NUMBER		
1711				
NOTIFICATION DATE		DELIVERY MODE		
06/16/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/535,700

Applicant(s)

OOE ET AL.

Examiner

JASON HECKERT

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2010.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 4-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 2, 4-24 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Due to the applicant's amendments to the claims, the previous rejections are rendered moot. Applicant has added significant new limitations regarding the adjustability of the various periods of voltage application. The prior art does not disclose said adjustability. However, the newly presented prior art of Walsh discloses an ion eluting system with polarity reversal, application halt, and period controlling means.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 4, 10-13, 17-20, 24 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2001-276484 ('484) in view of Walsh (CA 2242101). '484 clearly teaches a washing appliance containing an ion elution unit that generates silver ions between a pair of electrodes 121 and 122. Flow rate is detected by sensor 210. Power is provided by a DC power supply and controlled by a control unit 240 which includes a microcomputer. Voltage is supplied after detecting flow. Current and voltage are controlled by the control unit, which is capable of delivering a constant voltage or a variable voltage to water flowing through the ion unit. The DC power source is considered to be a drive circuit. The water flows through a feed valve 110. Thus, '484

teaches the limitations of claim 2 except for reversing polarities with an application halt period. Walsh discloses an ion elution unit for antimicrobial purposes comprising two electrodes 24 and 26. Current level to the electrodes can be modified by a variable resistor and appropriate control (page 4). Additionally, a timing mechanism can activate the cell for a period time, perform a halt period, and further reverse the polarity of the electrodes (page 4 and claim 16). This allows the unit to provide effective biocidal concentrations of ions without discoloration or damage to the appliance. It would have been obvious at the time of invention to modify '484 and include the functionality of reversing polarities with a halt period, as taught by Walsh, in order to purify the water stream. Claims 11-13 are regarded as intended use, however '484 also teaches utilizing control to apply power based on the measurements of the flow sensor 210.

4. In regards to claim 4, both '484 and Walsh disclose adjusting current to an appropriate level. Voltage modulation is well known to affect current by Ohm's Law. In regards to claim 11, Walsh teaches control of the ion dissolution rate. Furthermore, the ion dissolution rate is related to the current, which both Walsh and '484 disclose as controllable parameter. '484 also teaches flow rate monitoring.

4. Claims 5-9, 14-16, 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over '484 in view of Walsh and further in view of Robey OR JP 2000-343081 ('081). Neither '484 nor Walsh disclose including a current detector. Measuring electrical characteristics of an ion elution device is common in the art. Robey discloses including current sensing means (claim 16) which is connected to control means. The device is capable of detecting overload situations. '081 discloses including a voltage

detection means to detect abnormalities in an ion system. When an abnormality is detected, the user can be notified by a buzzer (see abstract). Claims 5-9, 14-16 include language which is regarded as intended use of the apparatus. The manner in which an apparatus operates is not germane to the issue of patentability of the apparatus itself. *Ex parte Wikdahl* 10 USPQ 2d 1546, 1548 (BPAI 1989); *Ex parte McCullough* 7 USPQ 2d 1889, 1891 (BPAI 1988); *In re Finsterwalder* 168 USPQ 530 (CCPA 1971); *In re Casey* 152 USPQ 235, 238 (CCPA 1967). Furthermore, apparatus claims cover what a device is, not what a device does. *Hewlett-Packard Co. v. Bausch & Lomb Inc.* 15 USPQ 2d 1525 (Fed. Cir. 1990); *Demaco Corp. v. F. Von Langsdorf Licensing Ltd.* 7 USPQ 2d 1222, 1224-1225 (Fed. Cir. 1988). The combination of '484 and Walsh obviate the structures that allow polarities to be reversed in an ion elution device. Robey and '081 obviate including the structures that allow for current or voltage detection as means to detect abnormalities. The combination of said prior art is believed to be capable of operating in the same manner as the applicant's invention, as it contains the same structures including control means and programmable microcomputers. Additionally, both Walsh and '484 disclose variable current and controlling dissolution rate based on such parameters. Additionally Walsh teaches variable time periods and application halt periods. Thus, the combination of the above references would be full capable of controlling time periods based on various measurements, such as current and voltage. It would have been obvious at the time of invention to modify '484 in view of Walsh, as stated above, and include means to detect

electrical characteristics, such as current or voltage, as disclosed by Robey and '081, in order to detect abnormalities.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON HECKERT whose telephone number is (571)272-2702. The examiner can normally be reached on Mon. to Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Barr/
Supervisory Patent Examiner, Art
Unit 1711

JMH